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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,634	09/21/2006	Kenji Morimoto	129536	1925

25944 7590 05/04/2009

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EXAMINER	
XU, LING X	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
05/04/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,634	MORIMOTO ET AL.	
	Examiner	Art Unit	
	Ling Xu	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17-35* is/are pending in the application.

4a) Of the above claim(s) *29-35* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 September 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 17-28 in the reply filed on 3/11/2009 is acknowledged. The traversal is on the ground(s) that the subject matter of all claims is sufficiently related that a thorough search for the subject matter of any one Group of claims would encompass a search for the subject matter of the remaining claims. Thus, the search and examination of the entire application could be made without serious burden. This is not found persuasive because a search of the product claims in Group I, may overlap the search of the method claims in Group II. However, a search of the product claims does not include all the limitations recited in the method claims. Therefore, additional search and examination are required for the method claims. A serious burden does exist.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17-19, 21-22, 25, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirohisa et al (JP-2002-121084).

Regarding claims 17-19 and 21-22, Hirohisa discloses a cordierite-based honeycomb structure comprising a chemical composition, of 30-45% by mass of alumina (A1203), 12-16% by mass of magnesia (MgO) and 42-56% by mass of silica (SiO2) (abstract and claims). The honeycomb structure possesses the following physical properties:

(1) porosity: 55-80%;

(2) open frontal area: no less than 50;

(3) mean pore size: 10-40 micrometers;

(4) compression strength in the A axis: 3.0 MPa or more (see claims of Hirohisa).

As stated above, Hirohisa discloses the honeycomb comprising the same structure and being made from the same chemical composition as recited in claims 17-19 and 21-22. Accordingly, the same honeycomb would also have the same properties as recited in claims 17-19 and 21-22 including properties (5)-(9).

Regarding claims 25 and 27, Hirohisa discloses a method of making the honeycomb (see examples), which use the same materials and process steps for making the surface portion as well as the central portion of the honeycomb. Based on the method disclosed by Hirohisa, it is expected that the honeycomb would have substantially uniform porosity and mean pore size at both of the surface portion and the central portion.

Claim Rejections - 35 USC § 102/103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 18-20, 26, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kotani et al (US 5,545,243).

Regarding claims 18-20, Kotani discloses a cordierite-based honeycomb structure comprising a chemical composition, of 30-45% by mass of alumina (A1203), 12-16% by mass of magnesia (MgO) and 42-56% by mass of silica (SiO2) (col. 4, lines 15-25). The honeycomb structure possesses the following physical properties:

(1) porosity: 45-55%;

(3) mean pore size: 5.1 - 34.6 micrometers;

(8) rate of thermal expansion: 0.08 - 0.46x$10^{-6}/^{o}$C;

(10) specific surface are: 0.09-0.4 m2/g (see Table 2).

Kotani also discloses that it is possible to improve the properties as shown in Table 2 by changing the raw materials, particle sizes of the raw materials, and/or the amount of poring agents added to the composition (col. 8, lines 20-25).

As stated above, Kotani discloses the honeycomb comprising the same structure and being made from the same chemical composition. Accordingly, the same honeycomb would also have the same properties as recited in claims 18-20 including properties (4)-(7), and (9). Or in the alternative, it would have been obvious to one of

ordinary skill in the art to obtain the claimed honeycomb having the claimed properties by adjusting the raw materials, the particle sizes of the raw materials, and/or amount of the additives such as poring agents added to the composition for making the honeycomb as suggested by Kotani.

Regarding claims 26 and 28, Kotani discloses a method of making the honeycomb (e.g. col. 4, lines 15-35), which use the same materials and process steps for making the surface portion as well as the central portion of the honeycomb. Based on the method disclosed by Hirohisa, it is expected that the honeycomb would have substantially uniform porosity and mean pore size at both of the surface portion and the central portion.

4. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirohisa et al., as applied to claim 17 above, and further in view of Kotani et al.

As stated above, Hirohisa discloses the same honeycomb structure as recited in claim 17.

Hirohisa does not specify the specific surface area as recited in claims 23-24.

Kotani teaches a cordierite-based honeycomb structure comprising the same chemical composition as that of disclosed in Hirohisa including 30-45% by mass of alumina (A1203), 12-16% by mass of magnesia (MgO) and 42-56% by mass of silica (SiO2) (col. 4, lines 15-25).

Kotani also teaches that the honeycomb structure possesses the following physical properties:

(1) porosity: 45-55%;

(3) mean pore size: 5.1 - 34.6 micrometers;

(8) rate of thermal expansion: 0.08 - 0.46x$10^{-6}/^{o}$C;

(10) specific surface are: 0.09-0.4 m2/g (see Table 2).

Kotani further teaches that it is possible to improve the properties as shown in Table 2 by changing the raw materials, particle sizes of the raw materials, and/or the amount of poring agents added to the composition (col. 8, lines 20-25).

Accordingly, it would have been obvious to one of ordinary skill in the art to obtain the honeycomb with the claimed properties including the specific surface area by adjusting the raw materials, the particle sizes of the raw materials, and/or the amount of the additives such as poring agents added to the composition for making the honeycomb, as suggested by Kotani.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling Xu whose telephone number is 571-272-7414. The examiner can normally be reached on 8:00 am- 4:30 pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ling Xu
Primary Examiner
Art Unit 1794

/Ling Xu/
Primary Examiner, Art Unit 1794

Lx
May 1, 2009

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